

METHOD AND APPARATUS FOR COATING A SUBSTRATE USING
COMBUSTION CHEMICAL VAPOR DEPOSITION

ABSTRACT OF THE DISCLOSURE

A method and apparatus for coating a surface of a substrate using combustion chemical vapor deposition is disclosed. A chemical vapor deposition stream, composed of a coating precursor and a combustible medium, is directed toward a substrate and combusted to provide a reacted coating precursor in a gaseous plume.

- 5 The plume is modified by exposing it to a shield prior to the plume contacting the surface of the substrate and depositing a coating thereon. The shield serves to control the coating thickness and material characteristics of the deposited material.